Nov. 23, 1926. 1,608,183

A. QUANTE

SILAGE FILLER

Original Filed Oct. 17, 1923

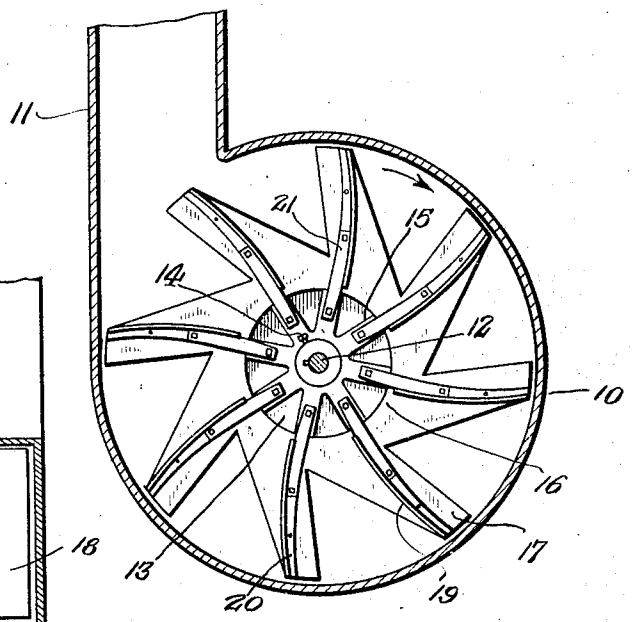


Fig. 1.

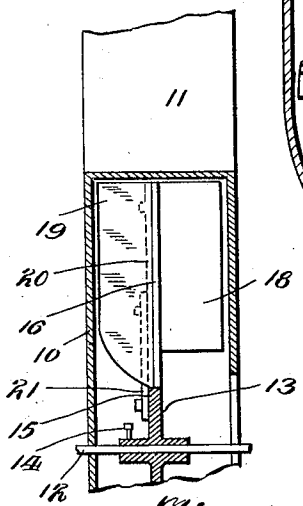


Fig. 4.

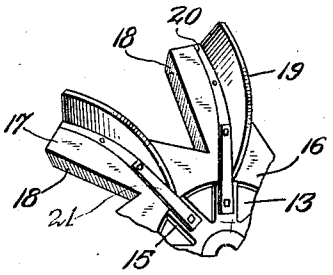


Fig. 2.

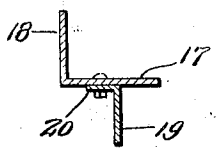


Fig. 3.

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UNITED STATES PATENT OFFICE.

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SILAGE FILLER.

Application filed October 17, 1923, Serial No. 669,035. Renewed October 18, 1926.

The present invention relates to a silage filler, and more particularly to a rotary cutter and conveyor fan for use in comminuting material and delivering it under air pressure through a pipe or spout.

An object of the present invention is to provide a strong, durable and simply constructed device combining these features, and wherein the body part thereof may be stamped from a single blank and including the cutting blades, and separate fan blades which are arranged for mounting directly upon the body part of the device for cooperation with the cutting blades to feed the material after it is cut.

Another object of the invention is to provide a device which is relatively compact and will occupy but small space, and a device which may be economically and easily manufactured, assembled and repaired when necessary.

Another feature of the invention is to provide an important structure of the parts, and braces which connect the parts together in such a manner that the whole structure is interbraced and made rigid, and a device which is capable of revolving at a high rate of speed.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claim appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views:—

Figure 1 is a vertical section taken through a combined cutter and blower constructed according to the present invention.

Figure 2 is a fragmentary perspective view of a portion of the rotary member.

Figure 3 is an enlarged transverse section taken through one of the radiating arms of the rotary member, showing the mounting of the fan blade thereon.

Figure 4 is a fragmentary vertical section taken transversely through the upper part of the device, showing the rotary member in the casing.

Referring to the drawing 10 designates a suitable casing provided at one side with a tangential outlet pipe or spout 11 through which material, after being cut, is adapted to be fed under air pressure. Arranged axially within the casing 10 is a shaft 12 upon which is keyed a hub casting 13 of suitable size and thickness, and which may be provided with a set screw 14 or the like for binding the hub 13 on the shaft 12. The hub 13 is of substantially disc form and provided upon one side with a plurality of raised ribs 15 which radiate from the central portion of the hub and which terminate at the outer edge of the hub.

The rotary member includes a body portion 16 pressed out of a single sheet or piece of steel and provided with outstanding arms 17 which are substantially radial but which are inclined backwardly at a suitable angle to accommodate the fan blades. Each arm 17 integrally formed upon one edge thereof has a fan blade 18 which extends at right angles to the arm 17 and which is substantially of the length of the adjacent edge of the arm, and projects laterally from the arm in a direction opposite to that of the ribs 15.

The material to be cut may be introduced into the casing 10 in the usual manner near the center thereof so as to bring the material in the path of knives 19 so that the knives may cut the material and the fan blades 18 may carry it around in the casing to the spout or outlet 11.

The arms 18 and the body 16 are provided, at the side opposite to the fan blades 18, with curved cutting blades 19 having attaching flanges 20 at their inner edges adapted to lie flat against the body portion 16 and to be riveted or otherwise suitably secured thereto. The cutting blades 19 extend outwardly at substantially right angles to the body portion 16 and gradually decrease in depth from the outer ends of the arms 17 to the inner edges of the cutting blades 19 to form a bight with the side of the casing 10 within which to catch and crush the material entering the casing. The blades 19 are given a preferably forward curvature to provide suction pockets behind them for drawing the material being cut over the curved edges of the blades 19.

The blades 18 act as fan blades to create the necessary suction through the casing for drawing in the material through the central opening in the casing and for expelling the cut material passing from the cutting blades 19 up through the stack 11. The shaft 12 extends beyond the casing 10 and is provided with any suitable rotating means, forming no part of the present invention.

The blades 19 are each provided with a brace 21 which is riveted or bolted to the

adjacent rib 15 of the hub and which extends radially in overlapping relation upon the adjacent flange 20 of the blade to not only make the blade 19 more rigid but to also provide a rigid connection between the body part 16 and the hub 13.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claim:—

What is claimed is:—

A silage filler comprising a cylindrical casing having a central inlet opening and an outlet spout disposed radially at one side of the casing, a rotatable shaft axially mounted in the casing, a hub on the shaft, a metal plate carried by and having a central opening receiving the hub and having radial arms, each of said radial arms having at one edge a laterally bent fan blade arranged to fit the interior of the casing at one side of the plate, and a cutting blade secured to each arm at the other side thereof and having a cutting edge remote from the arm and receding from the adjacent wall of the casing and from the outer to the inner end of the cutting blade.

In testimony whereof I affix my signature.

AUGUST QUANTE.